



**UNIVERSITY OF GONDAR,
COLLEGE OF MEDICINE AND HEALTH SCIENCES,
INSTITUTE OF PUBLIC HEALTH**

Demand for long acting contraceptive methods and associated factors among currently married reproductive age women attending care at ART clinic in Bahir Dar City, Northwest Ethiopia.

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List of Acronyms

AIDS- Acquired Immuno-Deficiency Syndrome

AOR- Adjusted Odd Ratio

ART- Anti- Retroviral Therapy

ARV- Anti-Retroviral

BOFED- Bureau of Finance and Economic Development

CI- Confidence Interval

COR- Crude Odd Ratio

ETB- Ethiopian Birr

EDHS- Ethiopian Demography and Health Survey

FP- Family Planning

HIV- Human Immuno-Deficiency Virus

IRB- Institutional Review Board

IUD- Intra uterine device

LACMs- Long Acting Contraceptive Methods

LARCs- Long-Acting Reversible Contraceptives

MDG- Millennium Development Goal

MOH- Minister of Health

NGOs- Non-Governmental Organizations

OR- Odd Ratio

PMTCT- Prevention of Mother-To-Child Transmission

Pre-ART- Pre- Antiretroviral Therapy

UNAIDS- United Nations Program on HIV/AIDS

WHO-World Health Organization

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Abstract

Introduction: About one third of unintended pregnancies occur among women accessing contraception. Many of whom are using short-term methods that require user adherence on a daily or quarterly basis. One of the strategies for the prevention of mother-to-child transmission of HIV is prevention of unintended pregnancies among HIV-positive women. However, studies conducted on demand for long acting contraceptive methods in this particular group of people is scarce and unavailable.

Objective: To assess demand for long acting contraceptive methods and associated factors among currently married reproductive age women attending care in ART clinic in public health institutions at Bahir Dar City, Northwest Ethiopia.

Methods: An institution-based cross-sectional study was conducted among 654 systematically selected reproductive age women attending care in ART clinic at Bahir Dar city from March to April, 2014. A structured and pretested interviewer administered questionnaire was used to collect data. EPI info version 3.5.3 for data entry and SPSS version 16 for analysis was used. Both bivariate and multivariable analyses were employed. In multivariable analysis p-value less than 0.05 was considered as a statistical significant and odds ratio with 95% CI was used to assess the presence and strength of association.

Results: About 656 respondents were participated in the study with 99.4% response rate. Among these two questionnaires were incomplete and were excluded. The mean age of the study participants was 31.67 and SD ± 5.46 . The demand for long acting contraceptive methods was 36.7% (95% CI: 33.2, 40.6). Being urban resident [AOR= 3.05, 95% CI: 1.34, 6.89], having elementary educational level [AOR = 2.31, 95% CI: 1.34, 3.99], having four or more alive children [AOR= 3.86, 95% CI: 1.62, 9.20], want to give birth after two year [AOR = 5.68, 95% CI: 3.05, 11.58], want no more child [AOR = 7.78, 95% CI: 4.15, 14.58] and having past experience to LACMs [AOR = 6.35, 95% CI: 4.09, 9.87] were positively associated while myths heard about LACMs [AOR = 0.45, 95% CI: 0.29, 0.68] and having information on the availability of PMTCT services [AOR= 0.46 95% CI: 0.24, 0.89] were negatively associated with the demand for LACMs.

Conclusion and recommendations: Demand for LACMs in this study was low. Myths about LACMs were common in the community and are the major barriers for the promotion and utilization of the methods. So it is important to do a lot on demand creation on LACMs and bring attitudinal change related to myths through provision of information, education and communication.

Key words: LACMs, Demand, HIV, Ethiopia.

1. INTRODUCTION

1.1 Background

Globally, an estimated 35.3 million people were living with HIV in 2012. About 3.3 million of them are under the age of 15. More than two-thirds (70 percent) of all people living with HIV, 25 million, live in sub-Saharan Africa—including 88 percent of the world's HIV-positive children. An estimated 260,000 children are becoming newly infected each year [1]. Women account for half of the estimated adults living with HIV and AIDS worldwide [2], but higher (59%) in sub-Saharan Africa [3]. According to EDHS 2011, Adult HIV prevalence is 1.5% (Male=1% while HIV prevalence among women age 15-49 is 1.9 percent) and HIV prevalence among pregnant women is 2.4% [4].

About ninety percent of new HIV infections among children under the age of 15 are a result of mother-to-child transmission of HIV. World Health Organization (WHO) and the United Nations Joint Programme on HIV/AIDS (UNAIDS) have outlined a four-element strategy to guide the prevention of mother-to-child transmission (PMTCT) of HIV. The second element of this strategy is prevention of unintended pregnancies among HIV-infected women[5]. Studies have shown that this strategy is at least equally as cost-effective as applying the traditional model of PMTCT services (the third element of the strategy) [6] but it is often overlooked strategy [7].

Globally unintended pregnancy is very high (accounts 38%, and reaches an estimated 51–90% among women living with HIV in some settings) and responsible for 27% of maternal deaths [8]. A study conducted on predictors of unintended pregnancy in Kersa, Eastern Ethiopia showed about 27.9% of pregnancies were unintended [6].

The unmet need for family planning among women living with HIV continues to undermine efforts to eliminate new HIV infections among children. Reducing unmet need for family planning will reduce new HIV infections among children and improve maternal health however it remains high [5]. In developing countries, the number of

women who have an unmet need for modern contraception in 2012 is 222 Million (26%) [9, 10]. It is high in sub-Saharan Africa, surpassing 30% in some countries [11]. About one third of unintended pregnancies occur among women accessing contraception. Many of whom are using short-term methods that require user adherence on a daily or quarterly basis [11]. Long-acting reversible contraceptives (LARCs) and sterilization are the most cost-effective methods of contraception but are rarely used in sub-Saharan Africa [12].

Although impressive increases in contraceptive prevalence rate have been achieved in Ethiopia during the past decade (from 8% to 29%), unmet need for family planning (FP) still remains high (25%). Long-acting and permanent methods of contraception (LA/PMs) remain out of reach for large numbers of women and couples who want to space or limit child bearing [13, 14].

Empirical evidence indicates that in some settings, the childbearing intention of HIV positive women is reduced [15, 16]. So LACMs are the ideal/appropriate choices for women living with HIV/AIDS. However it is not found a study that document the demand for LACMs in this particular group of individuals. So this research was conducted on demand for LACMs and associated factors among currently married reproductive age women attending care at ART clinic in Bahir Dar City, Northwest Ethiopia.

1.2 Literature Review

1.2.1 Demand (met and unmet need) for long acting contraceptives

It is documented that the demand for LAPCMs was 71.35% with 27.7% of women were using these methods in a study conducted among Kurdish women in Mahabad, Iran irrespective of HIV status [17]. Results from nationally representative surveys in southern Africa (South Africa and Zimbabwe) on provision of long-acting reversible contraception in HIV-prevalent countries showed that utilization of LARCs was 34% (IUDs 18% and implants 16%) irrespective of HIV status [18]. A cross-sectional study conducted on factors impacting knowledge and use of long acting and permanent contraceptive methods by postpartum HIV positive and negative women in Cape Town, South Africa documented that 6.44% were using long acting and permanent methods, all of whom were using sterilization[19].

The result of studies conducted in Batu town, Central Ethiopia and Goba town, Southeast Ethiopia on demand for long acting and permanent contraceptive methods and associated factors among family planning service users revealed that the total demand for long acting and permanent contraceptive methods irrespective of HIV status was 25.4% (met need 3%, unmet need 22.4%) [20] and 18.1% (met need 8.7% and unmet need 9.4%) [21] respectively.

According to EDHS 2011, in the general population utilization of long acting reversible contraceptive methods (implants and IUDs) and permanent contraceptive method (female sterilization) among married women is less than 5% (Implants 3.4%, IUD 0.3% and female sterilization 0.5%)[14]. A cross sectional community based survey conducted in Mekelle town, north Ethiopia on factors associated with utilization of long acting and permanent contraceptive methods among married women of reproductive age revealed that the overall prevalence of LAPMs use was 12.1% (Implants 10.6% and IUD 1.5) with no users for female sterilization [22].

1.2.2 Factors associated with demand for long acting contraceptive methods

1.2.2.1 Demographic Variables

Evidence showed that different demographic factors have association with unmet need and total demand for modern contraceptives including long acting contraceptive methods. A study done in Batu town, central Ethiopia, showed that women with age group of 30-34 and 35-49 had higher demand for LACMs than younger one [20]. In this study it was noted that the number of live children was found to be an important predictor of demand for LAPM that those with one or more children had higher demand than those who had no child. Other studies done in Ethiopia and Iran showed Age, number of living children, place of residence, emerged as significant factors affecting unmet need [17, 22-27].

A study done in Mekelle town revealed that mothers who had two or more pregnancies were more likely to use LAPM as compared with those who had one pregnancy[19]. Another study conducted in Southern Nations, Nationalities and Peoples region, Ethiopia, showed that women who live in rural areas were found more likely to have unmet need for family planning compared to those residing in urban areas [23]. Contrary result was found in a study done in Goba Town, South East Ethiopia that unmet need was not associated with socio-demographic variables [21]. In addition, a study conducted in eastern Sudan showed that age, parity and residence were not associated with total unmet need for family planning [28].

1.2.2.2 Socioeconomic Variables

Many studies have documented that respondent's education level determines both the demand and the unmet need for LACMs. Different studies revealed that women's education affect unmet need positively [17, 22-28]. Women with secondary or higher education and urban women show higher demand for and use of contraception than less educated [20]. The same association was seen in partner's education [23, 24, 28]. Women who were house wives (who have no work except house chores) and daily laborers were less likely to utilize modern contraceptives [23, 27, 28]. Having information about LACMs is mandatory to utilize the service. Women who had no access to mass media had higher level of unmet need [23]. Being wealthy strongly

predicted the use of modern contraception [25]. It is supported by a study done in 13 countries in sub-Saharan Africa that women in the richest wealth quintile were more likely than those in the poorest quintile to practice long-term contraception[29]. The result of a study conducted in Butajira district, South Central Ethiopia, showed that women discussing about contraception with partners were found more likely to use family planning [24]. It was found that the use of LAPMs was significantly associated with main decider of using methods in a study done in Goba town, Bale zone, Southeast Ethiopia [21].

1.2.2.3 Method related factors

Past experience for long acting contraceptives may have effect for current use. A study done in Goba Town, South East Ethiopia, documented that the use of LAPMs was significantly associated with ever use [21]. Myths heard and misperceptions towards LACMS can affect the demand negatively. A study made in Batu town reflected this idea [20].

1.2.2.4 Proximate determinants

Women's Knowledge towards LACMs are prerequisites to address unmet need issue. A study done in Southern nations, nationalities and peoples region, Ethiopia demonstrated that knowledge of family planning had significant factor affecting unmet need [23]. A study in Mekelle town, north Ethiopia stated that mothers who had high knowledge were more likely to use LACMs as compared with those who had low knowledge [22]. Additionally a study done in Cape Town, South Africa, documented that poor knowledge regarding LACMs is likely to be contributing to the poor uptake of these methods[19]. However, Studies in Jimma Zone, Ethiopia and in Goba Town, Southeast Ethiopia documented that knowing any of LACMs (general knowledge about LACMs) does not have significant association with demand [21, 30].

Empirical evidence indicates that in some settings, individuals who test HIV-positive reduce their childbearing intentions [15, 16]. The association between child bearing (reproductive) intention and the demand and utilization of LACMs is widely studied on the general population and showed as significantly associated. For instances, studies

conducted in Mekelle town, north Ethiopia [22], in Batu town, Ethiopia, [20] in 13 countries in sub-Saharan Africa [29], and in Mahabad, Iran [17] revealed that women who do not want to have additional child were significantly associated with demand and utilization for LACMs.

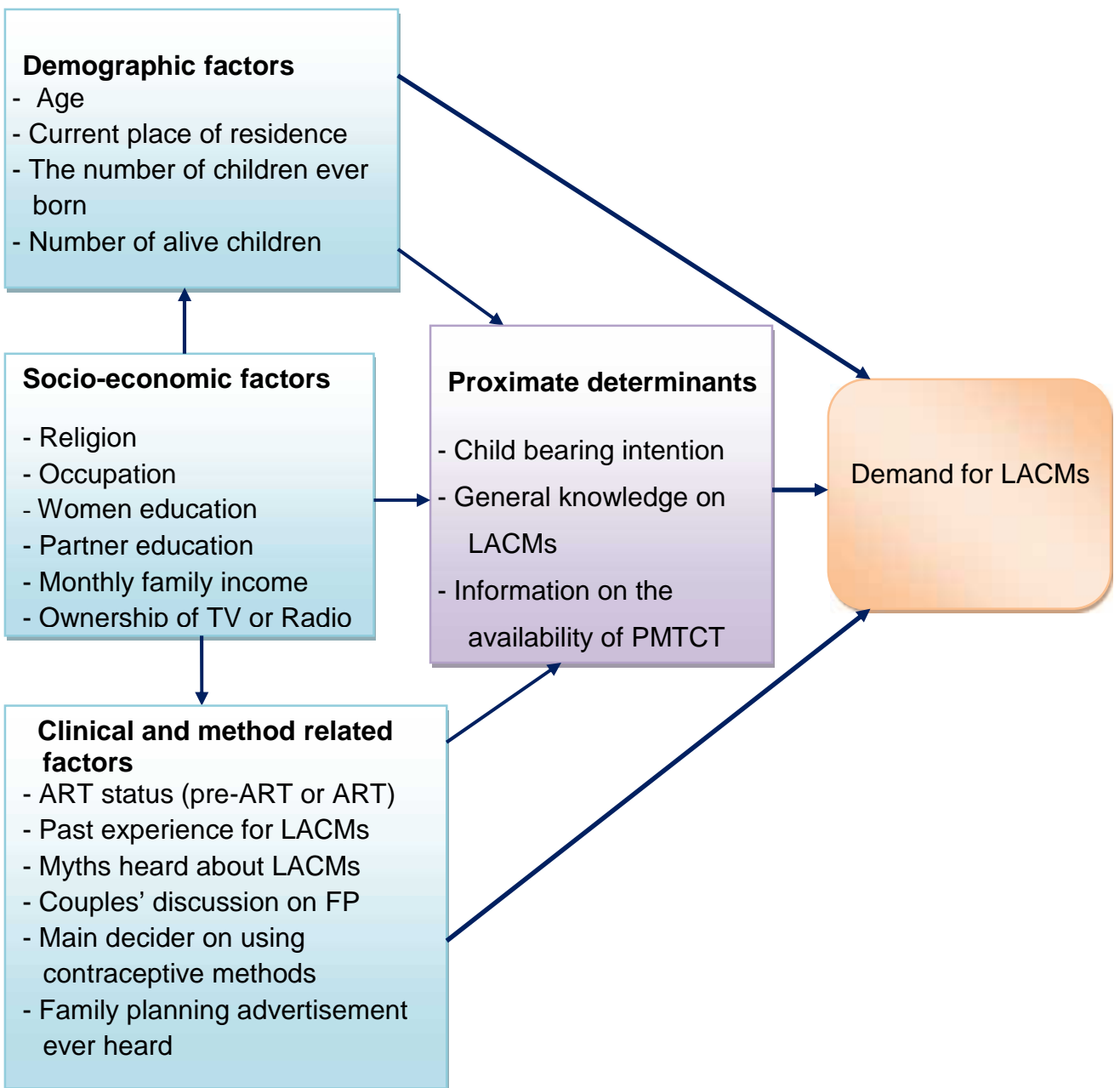


Figure-1: Conceptual framework for demand for long acting contraceptive methods.

1.3 Justification

The global unintended pregnancy rate is very high among women living with HIV. One of the targets of MDG6: halve halted by 2015 and begun to reverse the spread of HIV/AIDS and a target of WHO Global health sector strategy on HIV/AIDS from 2011-2015, eliminate new HIV infections in children: reduce new HIV infections in children by 90% (compared with a 2009 baseline) will not be possible without addressing unintended pregnancies.

Long-acting and permanent methods are by far the most effective types of modern contraception (>99% protection over a year of use, with very low pregnancy rates among typical users that approach perfect-use rates); They are very safe, convenient, and cost-effective in the long-run than short-acting methods since they are less dependent on user adherence and consistent supply chains and have lower discontinuation rates and longer duration of action. While the LACM offers so many comparative advantages it is not widely used in the general community and is not adequately studied in HIV positive individuals.

So the aim of this study was to assess the demand and associated factors for LACMs among currently married reproductive age women attending care in ART clinic. The findings of the study come up with recommendations for the concerned organizations and stake holders which in turn will improve service provision and its uptake/demand. Eventually individuals, families, communities and the nation as a whole will be benefited. Additionally the study findings may be used as an input for other researchers.

2. Objectives

2.1 General objective

- To assess demand for long acting contraceptive methods and associated factors among currently married reproductive age women attending care at ART clinic in Bahir Dar City, Northwest Ethiopia.

2.2 Specific objectives

- To determine the magnitude of demand for long acting contraceptive methods among currently married reproductive age women attending care in ART clinic.
- To identify factors associated with demand for long acting contraceptive methods among currently married reproductive age women attending care in ART clinic.

3. Methods

3.1 Study Design

An institution-based cross-sectional study was conducted.

3.2 Study area and period

The study was conducted in public health institutions at Bahir Dar city, Northwest Ethiopia from March to May, 2014. Bahir Dar city is the capital city of Amhara region. It is located at 565 km far from Addis Ababa, the capital city of Ethiopia, to Northwest. The city administration has 21 kebele (9 urban and 12 rural Kebeles) having a total of 288,200 population (BOFED 2014), of which 147,597 are females. Using a conversion factor of 23.2% the total number of reproductive age women is 66,862.

In the city there were one governmental Hospital, namely Feleg-Hiwot Referral Hospital, One private general Hospital, 10 health centers, more than 10 higher and 20 medium private clinics and more than 60 private drug retails. Among the health centers, only five were providing Pre ART and ART services but two of them began services provision late having few (Less than 20 clients) service users.

3.3 Source population

All currently married reproductive age (15-49 years) women who were attending care at ART clinic in Bahir Dar city.

3.4 Study population

All currently married reproductive age women who were attending care at ART clinic in public health institutions at Bahir Dar city during data collection period.

3.4.1 Inclusion and exclusion criteria

3.4.1.1 Inclusion criteria

All currently married reproductive age women attending care in ART clinic.

3.4.1.2 Exclusion criteria

- Reproductive age women who were seriously ill were excluded.
- Reproductive age women who had been declared as infecund by physician

3.5 Sample size determination and sampling procedure

3.5.1 Sample size determination

The sample size was computed by using single population proportion formula based on the following assumptions: Since there is no previous study on demand for LACMs and its associated factors on HIV positive women, 50% was considered as proportion (p) for demand. By considering standard normal distribution the Z-value at 95% confidence level (CI) is 1.96. 4% were considered as margin of error. Based on this, the sample size was computed as:

$$n = \frac{Z^2 \cdot p(1-p)}{d^2} = \frac{1.96^2 \cdot 0.5 \cdot 0.5}{0.04^2} = 600$$

The final sample size planned was 660 after considering 10% allowance for non response.

3.5.2 Sampling procedure

From the health centers which were providing ART services the number of service users in two health centers, namely Tis-Abay and Shembet health centers, were few (less than 20 clients). So they were not included in the study. Hence Feleg-Hiwot referral Hospital and three health centers, namely Bahirdar health center, Han health center and Abay health center were used to get study participants. The total number of reproductive age (15-49 years) married women who were served in each service delivery points during one month had been estimated based on a one week preliminary survey. The sample size was proportionally allocated for each service delivery points (Hospital and health centers) and the study participants were selected by systematic random sampling in an interval of seven.

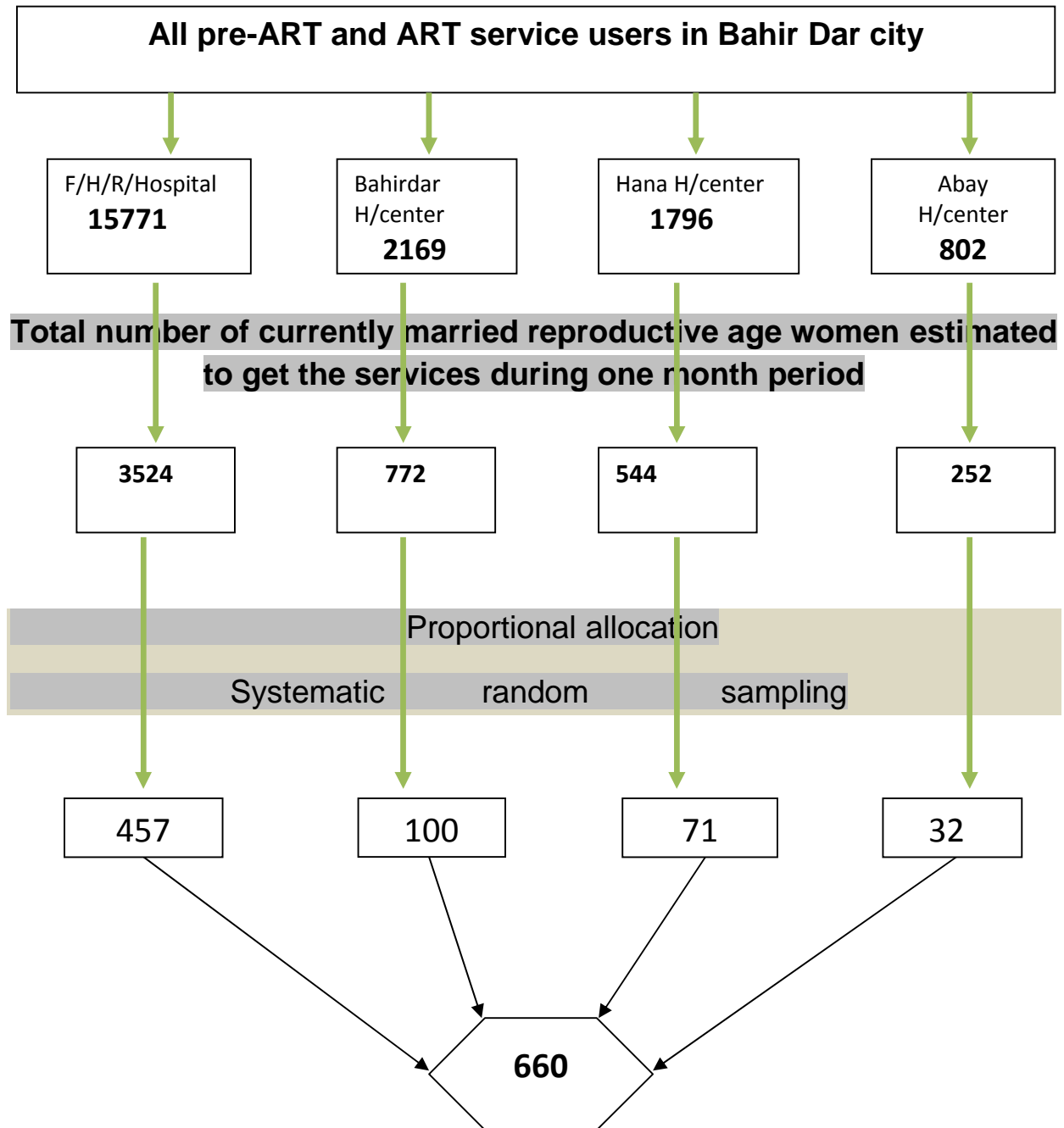


Figure-2: Schematic Presentation of sampling technique

3.6 Variables of the study

3.6.1. Dependant Variables

Demand for long acting contraceptive methods

3.6.2. Independent variables

➤ **Demographic Variables**

- Age
- Current place of residence
- The number of children ever born
- Number of children alive

➤ **Socioeconomic Variables**

- Religion
- Occupation
- Women education
- Partner education
- Monthly family income
- Ownership of TV or Radio

➤ **Clinical and method related factors**

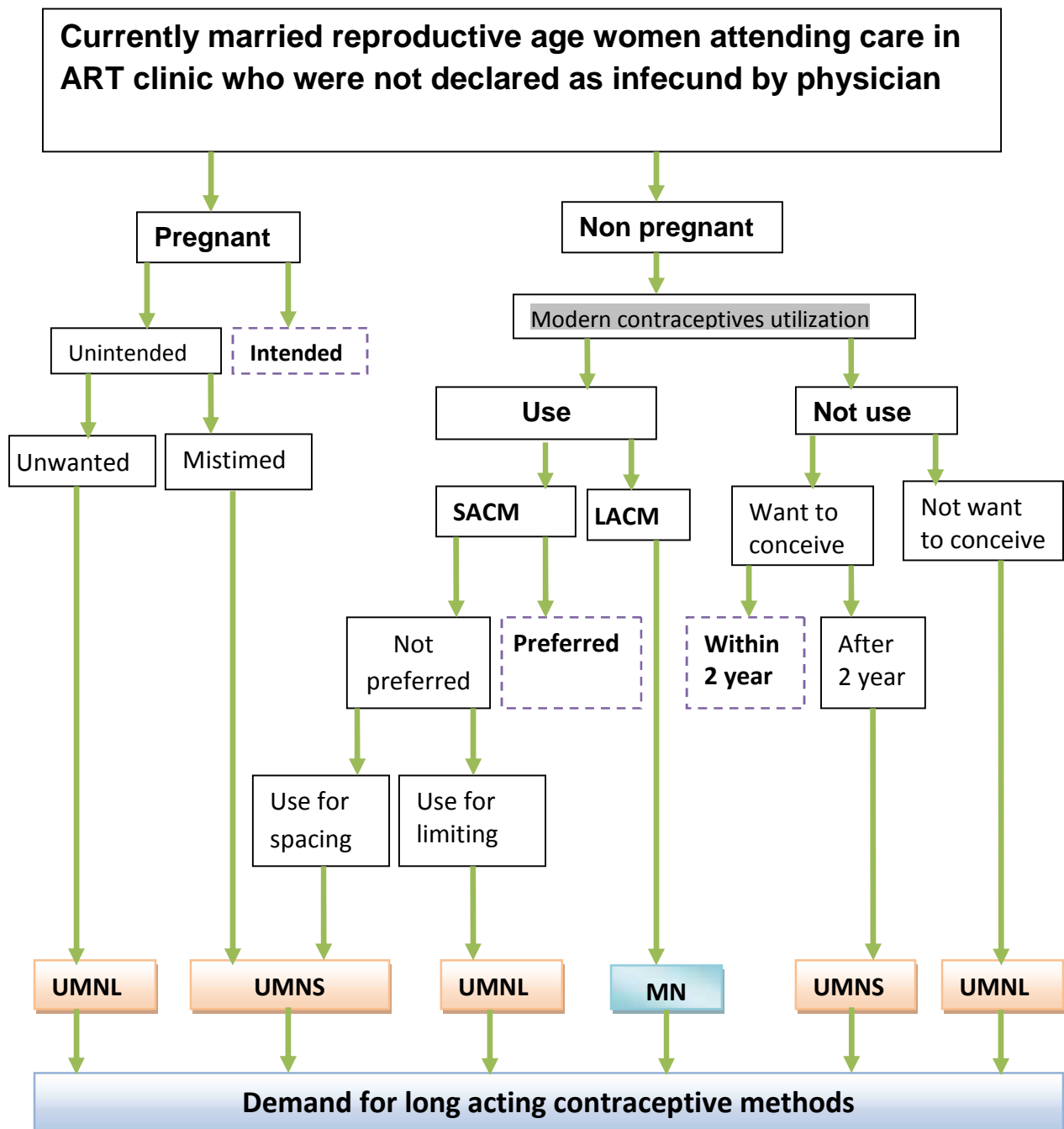
- ART status (pre-ART or ART)
- Past experience for LACMs
- Myths heard about LACMs
- Couples' discussion on FP
- Main decider on using contraceptive methods
- Family planning advertisement ever heard

➤ **Proximate determinants**

- Child bearing intention
- General knowledge on LACMs
- Information on the availability of PMTCT services

3.7 Operational definitions

- **Demand for long acting contraceptive methods:** the sum of long acting contraceptive methods being used (met need), unintended pregnancy (unmet need) and method that is desired but not used due to any reason (unmet need).
- **Unmet need for long acting contraceptive methods:-** the sum of unintended pregnancy and women having a desire to use long acting method but not used due to any reason.
- **Long acting contraceptive methods:-** Modern contraceptive methods that prevent unintended pregnancy for more than one year like Intrauterine devices (IUDs), sub dermal Implants and sterilizations (Tubal ligation and Vasectomy).
- **General knowledge on long acting contraceptive methods:-** If a woman mention at least one of the long acting contraceptive methods and one source.
- **Currently married Women:** Women who were in sexual union during data collection time.



SACM- Short acting contraceptive method; LACM- Long acting contraceptive methods
 MN- Met need; UMNL- Unmet need for limiting; UMNS- Unmet need for spacing.

Fig3: Schematic presentation of demand for long acting contraceptive methods.

3.8 Data collectors and supervisors

Five nurses as data collector and one health officer as supervisor were recruited to assist research work at the time of data collection.

3.9 Data collection tool and procedures

A structured and pretested interviewer administered questionnaire was employed to collect data. The questionnaire was prepared first in English and then translated to Amharic language and then re- translated back to English language by language experts. Data collectors and the supervisor were given training on data collection tool and the procedure by principal investigator. In every 7 interval, clients were requested to give the required information and the data collectors had read the verbal consent. Clients who were volunteered provided the required information. The supervisor and the principal investigator supervised the data collection process and looked for the data clarity/completeness.

3.10 Data quality

Data quality assurance was maintained with the under taking of the following: Language expert was used to translate the questionnaire so as to check consistency. Pre tested structured questionnaire was used. Training was given for data collectors and supervisor on the data collection tool and procedures. One supervisor with first degree in health science and the principal investigator supervised the data collection process and data completeness was checked daily.

3.11 Data processing and analysis

Data were checked, coded and entered in to EPI Info version 3.5.3 and exported to SPSS version 16 for analysis. Data were summarized by using appropriate descriptive summary measures like mean, frequency and percentage. Crude analysis was first made using bivariate logistic regression. Covariates having p-value less than 0.2 in bivariate analysis was further entered in to a multiple logistic regression model. Multivariable analysis was done using backward stepwise logistic regression. P-value less than 0.05 was used as a statistical significant and odds ratio with 95% CI was used to assess the presence and strength of association between covariates and dependent variable. The result was presented by text, tables and graphs/charts.

4. Ethical considerations

The data collection was carried out after ethical clearance was obtained from the Institutional Review Board (IRB) of Institute of public health, College of Medicine and Health Sciences, University of Gondar. Official permission was collected from Amhara Regional Health Bureau and Bahirdar City Administration Health Department, and co-operation letter was sent to the Hospital and health centers. Verbal consent was obtained from each participant. All the study participants were informed about the objective and importance of the study and were also informed about their right not to participate or a right to withdraw from the study at any time. So as to maintain confidentiality the data collectors were recruited from service providers and the data were collected anonymously (without their ID or name).

5. Results

5.1 Socio-Demographic and Economic characteristics of study population

A total of 656 individuals were participated in the study with a response rate of 99.4%. Among these two questionnaires (0.3%) were found incomplete and were excluded from the study. Thus 654 respondents were used for final analysis.

The mean age of the study participants was 31.67 years and standard deviation of 5.46 years. About 559 (85.5%) of the study participants were Orthodox Christians and 588 (89.9%) of study participants were urban dwellers. The median monthly family income was 1,000.00 with a minimum of 250.00 and a maximum of 9,000.00 ETB (Table1).

Table 1: Socio-demographic and economic characteristics of women attending care at ART clinic in Bahir Dar city, Northwest Ethiopia, 2014.

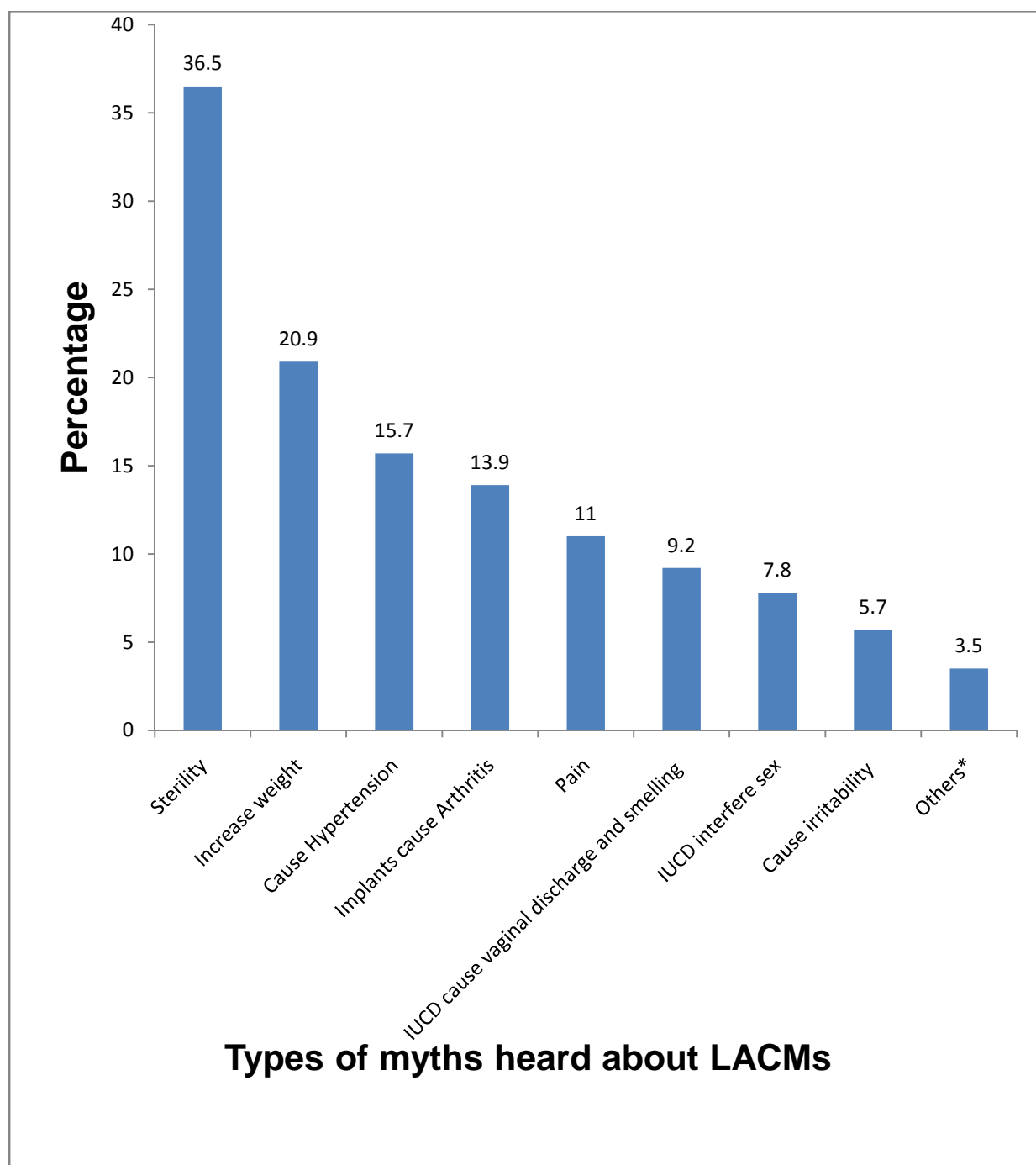
Variables	Category	Frequency	Percentage
Age (year)	15-24	49	7.5
	25-34	388	59.3
	35 and above	217	33.2
Religion	Muslim	65	9.9
	Orthodox	559	85.5
	Protestant	27	4.1
	Catholic	3	0.5
Current place of residence	Urban	588	89.9
	Rural	66	10.1
Occupation	House wife	247	37.7
	Daily laborer	130	19.9
	Government employee	127	19.4
	Merchant	124	19.0
	Others*	26	4.0
Educational status of women	No formal class	292	44.7
	Primary school	136	20.8
	Secondary school	110	16.8
	Preparatory, College and above	116	17.7
Educational status of the husband	No formal class	181	27.7
	Primary school	155	23.7
	High school	140	21.4
	Preparatory, College and above	178	27.2
Family monthly income (ETB)	<601	175	26.8
	601-1000	157	24.0
	1001-2500	183	28.0
	>2500	139	21.2

Ownership of TV & Radio	No	117	17.9
	Yes	537	82.1
Number of children ever born	0-2	480	73.4
	3 and above	174	26.6
Number of alive children	0-1	311	47.6
	2-3	297	45.4
	4 and above	46	7.0

‘*’ Private employee, Private, Farmer, and student.

5.2 Clinical and Method related characteristics of study participants

From all respondents, 533 (81.5%) were ART users. About 212 (32.4%) respondents had past experience for LACMs. One fourth, 168 (25.7%) and slightly more than half, 357 (54.6%) of the respondents had done discussion on family planning with their partner frequently and sometimes respectively. About 550 (84.1%) respondents had ever heard family planning advertisement in mass media. About 642 (98.2%) respondents had mentioned at least one LACMs and one source. Implants (98%) and IUCD (87%) were relatively more popular methods. About 118 (18.4%) and 50 (7.8%) respondents know female sterilization (Tubaligation) and male sterilization (vasectomy) respectively. The sources of information were Mass media, 550 (85.7%), health professionals, 548 (85.4%), neighbors, 147 (22.9%), friends, 94 (14.6%), husband 76 (11.8%) and others, 13 (2%) which include formal education and training. About 364 (55.7%) of study participants had ever heard myths about LACMs. Most commonly heard myths include cause sterility, weight increment and hypertension (Figure 4).



Others*: IUCD can be lost, causes heavy menstruation, and causes uterine cancer.

Figure 4: Percentage of respondents who ever heard myths about LACMs by myths type among women attending care at ART clinic in Bahir Dar city, Northwest Ethiopia, 2014.

The total contraceptive utilization among the study participants was about 497 (76%). From all respondents about 186 (28.4%) were using long acting methods. Among LACMs users the most commonly used long acting contraceptive method was Implants which accounts 153 (82.3%) (Figure 5).

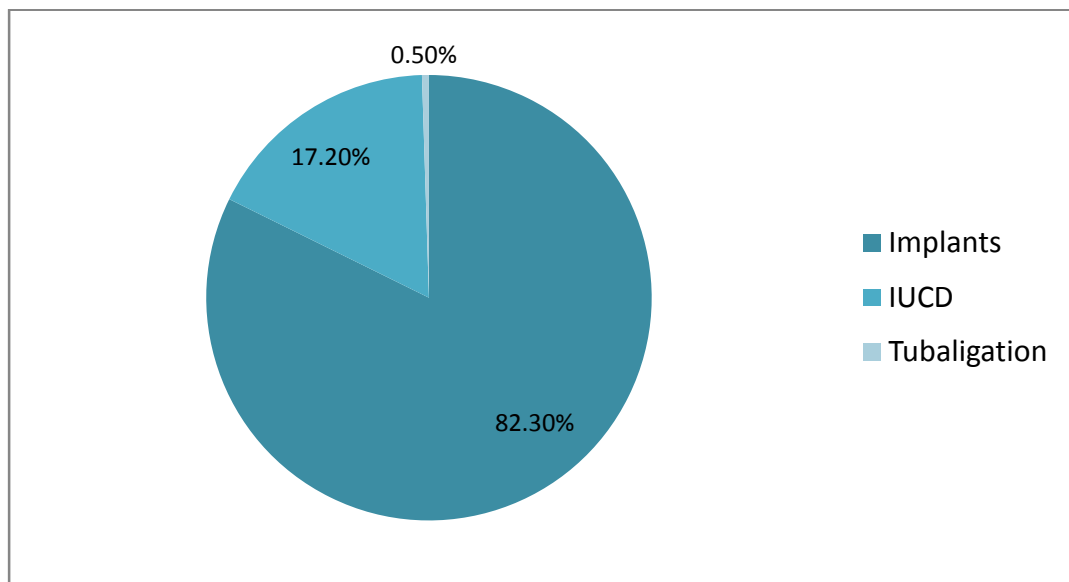


Figure 5: Percentage of LACMs being used by method type among women attending care at ART clinic in Bahir Dar city, Northwest Ethiopia, 2014.

5.3 Demand for LACMs among HIV positive women

The total demand for long acting contraceptive methods was **36.7%** (95% CI: 33.2% - 40.6%) (Figure 6).

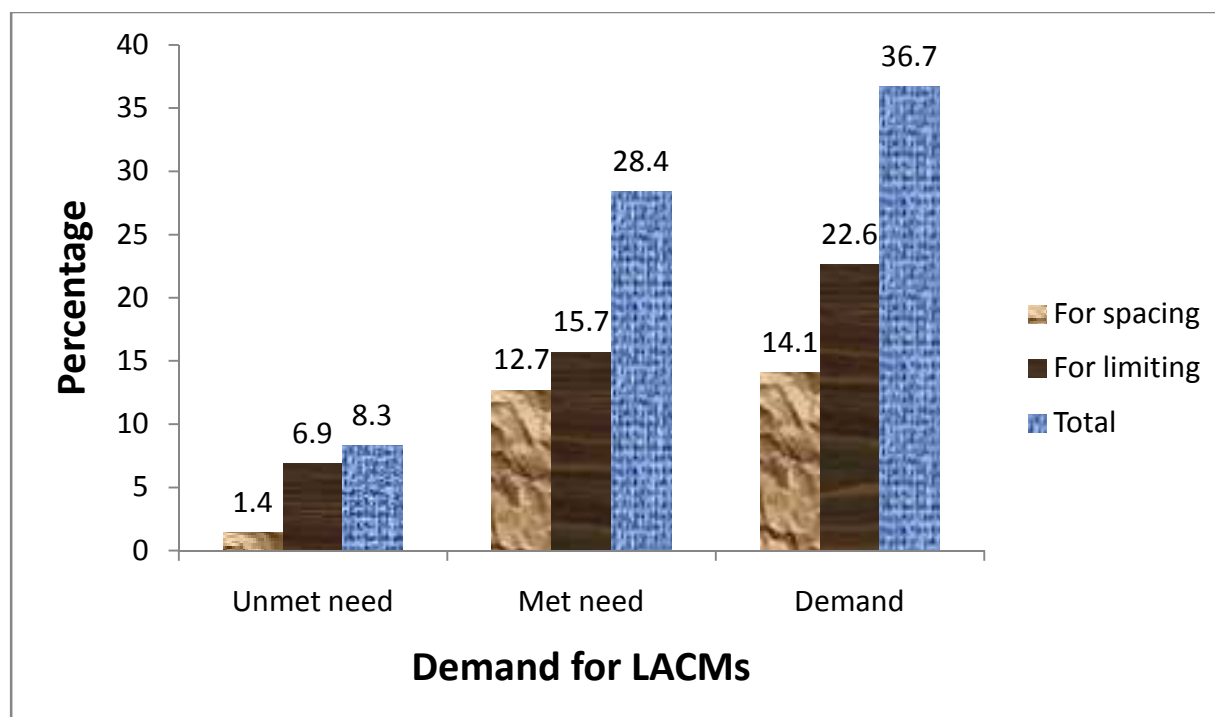


Figure 6: Demand for LACMs among women attending care in ART clinic in public health institutions at Bahir Dar city, Northwest Ethiopia, 2014.

5.4 Factors associated with demand for LACMs

In bivariate analysis age, place of residence, educational status of women, number of live births, the number of alive children they had, ART status, their birth intension, past experience for LACMs, myths heard about LACMs, and information on the availability of PMTCT services had p-value less than 0.2. However, in multivariable analysis place of residence, educational status of women, the number of alive children they had, birth/reproductive intension, past experience for LACMs, myths heard about LACMs, and information on the availability of PMTCT services had statistical significant association with the demand for LACMs. While the others failed to persist (Table 2).

The odds of demand for LACMs was three times [AOR= 3.05, 95% CI: 1.34, 6.89] higher among urban residents as compared to the rural ones. The odds of demand for LACMs was two times higher [AOR = 2.31, 95% CI: 1.34, 3.99] among elementary educational level respondents compared to those who did not have formal education.

The odds of demand for LACMs among women who had four or more children were four times higher as compared to those who had one child or not had at all [AOR= 3.86, 95% CI: 1.62, 9.20]. The odds of demand for LACMs was six times higher [AOR = 5.68, 95% CI: 3.05, 11.58] among women who had desire to give birth after two years and was eight times higher [AOR = 7.78, 95% CI: 4.15, 14.58] among who had desire no more children as compared to those who intended to have birth within two years. Women who had past experience on LACMs had six times [AOR = 6.35, 95% CI: 4.09, 9.87] higher demand for LACMs than those who did not have.

The odds of demand for LACMs was 55% [AOR = 0.45, 95% CI: 0.29, 0.68] lower among respondents who had heard myths on LACMs as compared to those who hadn't heard. Women who had had information on the availability of PMTCT services had 54% lower [AOR= 0.46 95% CI: 0.24, 0.89] demand for LACMs as compared to those who hadn't had the information (Table 2).

Table 2- Bivariate and multivariable analysis of variables associated with demand for LACMs in women attending care at ART clinic in Bahir Dar city, Northwest Ethiopia, 2014.

Independent variables		Demand for LACMs		COR (95%CI)	AOR (95% CI)
		Yes	No		
Age	15-24	13	36	1.00	
	25-34	125	263	1.32(.67- 2.57)	
	35 and above	102	115	2.46(1.23 - 4.89)	
Residence	Urban	225	363	2.11(1.16 - 3.84)	3.05 (1.35 - 6.89)*
	Rural	15	51	1.00	1.00
Educational Status of Women	No formal education	101	191	1.00	1.00
	Elementary school	56	80	1.32(.87 - 2.01)	2.31 (1.34 - 3.99)*
	High school	39	71	1.04(.66 - 1.64)	1.56 (.86 - 2.80)
	Preparatory, college and above	44	72	1.16(.74 - 1.81)	1.63 (.91 - 2.91)
ART status	Pre-ART	53	68	1.44 (.97 - 2.15)	
	ART	187	346	1.00	
Total live births	0-2	147	333	1.00	
	3 and above	93	81	2.60 (1.82 - 3.71)	
Number of alive children	0-1	88	223	1.00	1.00
	2-3	123	174	1.79 (1.28 - 2.51)	1.35 (.86 - 2.13)
	4 and above	29	17	4.32 (2.26 - 8.26)	3.86 (1.62 - 9.20)*
Birth intention	Want within two year	20	148	1.00	1.00
	Want after two year	66	80	6.11(3.46 -10.79)	5.68 (3.05 - 10.58)*
	No more children wanted	138	137	7.45(4.42 - 12.58)	7.78 (4.15 - 14.58)*
LACMs past experience	Yes	124	88	3.96(2.80 - 5.59)	6.35 (4.09 - 9.87)*
	No	116	326	1.00	1.00

Myths heard	Yes	120	244	.69(.51 - .96)	.45 (.29 - .68)*
	No	120	170	1.00	1.00
Information on the availability of PMTCT services	Yes	209	383	0.55(.32 - .92)	.46 (.24 - .89)*
	No	31	31	1.00	1.00
Note: 1.00= Reference, *=p-value <0.05, Hosmer Lemeshow test= 0.757					

6. Discussion

This study revealed that one third of HIV positive married women in reproductive age had the demand for LACMs (36.7%). This finding was higher than the studies conducted in Goba town, Southeast Ethiopia (18.1%)[21] and in Batu town, central Ethiopia (25.4%)[20] on the general population (irrespective of HIV-status). The possible reason for the observed differences might be due to low birth desire seen in HIV positive individuals[15, 16]. Other possible explanation for this difference is that HIV clients had frequent visits to health institution and had more regular contact with health care professionals. This might make them have information about LACMs, as it was seen in this study that 98.2 % of the respondents heard about at least one LACMs and one source. This frequent visit also provides an opportunity to discuss on family planning and other reproductive health matters. Hence the total demand for long acting contraceptives as well as their uptake might be higher in HIV clients than the general community.

Even though this finding was higher than the general population, it was not found as expected in HIV positive clients. Because long acting contraceptive methods are safe, convenient and cost effective and have relatively low failure rate (more effective) than short acting contraceptives. However, the demand for LACMs in this study was much lower than the study done in Mahabad, Iran (71.35%)[17]. The possible explanation for this difference might be due to socio-demographic or geographical variation.

This study revealed that the satisfied demand for LACMs was 28.4% which was higher than a study done in Gimbie town, West Ethiopia, among HIV positive clients (15.6%)[31]. Geographical variation might be the possible cause for this difference. It was also higher than studies done in Mekelle town (12.3%)[22], Goba town (8.7%)[21] and Batu town (3%) on the general population[20]. This might be related to difference in fertility intension between HIV positive individuals and general community. The result was in line with the study done in South Africa and Zimbabwe (34%)[18] and Mahabad, Iran (27.7%)[17].

Although the unsatisfied demand for LACMs (8.3%) was found lower than the study finding in Batu town (22.4%)[20] and was almost in line with a study in Goba town (9.4%) [21] among women in the general population, it is critically important to give due attention to address this gap in HIV positive individuals. Because unintended pregnancy in HIV patients has additional risks such as vertical transmission of the virus[1], and more serious complications if she ends with induced abortion[8].

In this study, it was found that the odds of having demand for LACMs among urban residents was almost 3 times higher as compared to those who were living in rural areas. This may probably because of the difference in general knowledge on LACMs, misperceptions towards LACMs and the number of children desired. The first two possible reasons may make rural residents choose short acting contraceptive methods which in turn results low demand for LACMs. In the general community the desire to have relatively less children is seen in urban residents than the rural ones that affect the demand positively. It is evidenced by 2011 Ethiopian demographic and health survey that rural women are having about twice as many children as urban women[14].

Demand for LACMs was found significantly associated with educational status. More specifically, the odds of having demand for LACMs was 2.31 times more likely in respondents who had elementary school education as compared to those who had no schooling. This might be due to difference in level of understanding about the comparative advantages of LACMs. But association was not found in higher education such as secondary school, Preparatory, college and above level. The possible explanation that demand for LACMs was associated with less educated but not associated with higher education might probably due to difference in occupation in which they were engaged. Those who are at primary education level usually engage to a labor having small earnings, such as daily labor. But it is less likely in those who are at higher level of education. This low occupation level is usually inconvenient for child bearing and rearing. Hence, their demand for LACMs can be relatively high.

In this study there was statistical significant association between demand for LACMs and the number of alive children they had. The odds of demand for LACMs was four

times higher in respondents who had four or more children as compared to those who had one or no child. This association was consistent with a study done in Batu town [20] though it was on the general population. Additionally a study done in Mekelle revealed that there was significant association between number of children they had and satisfied demand [22]. The possible reason can be when the number of children they have increased, their fertility desire be decreased which may be related to economic and/or health reason.

It is clear that utilization of any modern family planning method depends on the fertility desire of the couples. In this study it was noted that the fertility intension was found to be an important predictor of demand for LACMs. Demand for LACMs was six and eight times higher in HIV positive women who want birth after two year and who want no more child respectively as compared to the women who want birth within two year. Though it was done on the general population irrespective of sero status, the same association was seen in a study done in Batu town, Ethiopia [20]. It was also consistent with a study done in Mahabad, Iran [17].

Past experience for LACMs was strongly associated with demand for LACMs. This study revealed that study participants who had had past experience for LACMs had 6 times higher demand for LACMs than respondents who hadn't had experience. This association was also documented in the study conducted in Goba town on the general population irrespective of sero-status [21]. The reason for higher demand for LACMs in those who had past experience might be due to fact that past experience for LACMs may make them familiarized to the methods, make them have more information and they might appreciate method convenience and long term advantages of the methods. Eventually the total and satisfied demand can be high.

Myths and misperceptions towards LACMs were common in the study area (55.7%) and were found negatively associated with its demand. The odds of demand for LACMs was 55% lower in respondents who had heard myths about LACMs as compared to those who hadn't heard myths. A study conducted in Batu town on general population demonstrated this association [20]. The reason is obvious that

misperception towards LACMs makes people choose short acting family planning methods even in those who do not want any more children that results low demand and utilization for LACMs.

HIV positive women who had had information on the availability of PMTCT services had 54% lower demand for LACMs than those who hadn't had the information. This might be due to the fact that the two main concerns of HIV positive women for reduction in fertility desire are fear of HIV transmission to their baby and their health condition. However, after the initiation of ART their health become well. If this is supported by information about the availability of services or means to decrease mother to child transmission of the disease, their fertility desire may resume. Therefore, having information on the availability of PMTCT health services can have negative association with demand for LACMs.

7. Limitations of the study

The possible limitations might be:

1. The study did not include sexually active unmarried reproductive age women attending the services who might be at high risk for unintended pregnancy and for its subsequent effects/complications.
2. There might be a risk of social desirability bias whereby HIV positive women might over report their contraceptive use.
3. Since it was new topic, there was lack of adequate literatures which limits further discussion.

8. Conclusions

- The demand for long acting contraceptive methods among currently married HIV positive women was low.
- The unsatisfied demand for long acting contraceptive methods among currently married HIV positive women was high.
- Being urban resident, elementary educational level, having four or more alive children, having past experience to LACMs, want to give birth after two year, and want no more child had positive association with the demand for LACMs.
- While myths heard about LACMs and having information on the availability of PMTCT services were negatively associated with the demand for LACMs.

9. Recommendations

1. To Amhara Regional Health Bureau

- They need to advocate and work on demand creation on LACMs by providing information, education and communication (IEC) about their merits as well as myths related to the methods

2. To Health professionals

- They have to provide information, education and communication (IEC) on the multifaceted advantages of the methods and myths about them during family planning counseling and during health education programs.
- Creating opportunities for discussion and experience sharing towards LACMs among HIV positive women need to be considered

3. To researchers:

- Further studies are important to address the different aspects of LACMs, for instances met and unmet need and to address other variables.
- It is also mandatory to consider qualitative studies addressing myths on LACMs.

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11. Annexes

Annex I: Questionnaire (English version)

University of Gondar, College of Medicine and health science, institution of public health

I) Survey questionnaire information sheet

You are invited to participate in a research study to be conducted by MPH student at University of Gondar, Collage of Medicine and Health Science, Institute of Public health. Please read the following statements and ask any unclear points before you agree to participate.

1. Topic: Demand for long acting contraceptive methods and associated factors among currently married reproductive age women attending care at ART clinic in Bahir Dar city, Northwest Ethiopia.

2. Objective of the study: The main objective the study is to assess the demand for long acting contraceptive methods and associated factors among currently married reproductive age women attending care at ART clinic in Bahir Dar City, Northwest Ethiopia. Your truth full answers for all of our questions about family planning service will be very important to know the conditions of long acting contraceptive methods in reproductive age women who use ART and pre-ART services and associated factors in Bahirdar city. Based on the information what you will give us the result of this study will help all concerned bodies, for example, Amhara health bureau, Institution administrating bodies and NGOs, develop strategies that can decrease unmet need for long acting contraceptive methods and prevent unwanted pregnancies and its subsequent effects.

3. Participant procedure and guideline

- On this questionnaire your name will not be written, i.e anonymous is fully kept, all your response will be kept completely confidential.
- Your participation is fully voluntary. You are free not to participate totally or stop at any point of time or to choose not to answer any particular answer/s. Your

withdrawal from the study will not have any impact on your service utilization or any other penalty. But I greatly appreciate your truthful and honest participation. Responding to the survey questionnaire will take about 20 minutes.

4. Benefits and risks of participating in this study

- **Benefit:** A study participant will not have incentive for their participation but you will get appropriate contraceptive services based on recommendations to be forwarded to concerned bodies. You also be benefited from the health education about the benefit of using long acting contraceptive methods that will be given during the interview.
- **Risks:** There is no risk associated with being involved in the study but participants may spend extra time to respond the questionnaire.

5. You have a right to raise any question about this research project.

If you have any question you can direct to any of the following:

- ❖ Institutional Research Board of University of Gondar, College of medicine and health science, Institute of public health.
- ❖ Mr. Digsu Negese (MPH), University of Gondar, Institute of public health Epidemiology and Biostatistics Department.
e-mail: digsuneg@gmail.com
- ❖ Mrs. Hedija Yenus (MPH), University of Gondar, Institute of public health, Reproductive Health Department.
e-mail: kedijayenus@gmail.com
- ❖ Abebaw Addis (BSC), University of Gondar, Institute of public health, MPH/RH student.
e-mail: abebaw.addis@gmail.com Tel: 0910905798

Thank You!

II) CONSENT FORM

University of Gondar, College of Medicine and health science, institution of public health questionnaire on demand on long acting contraceptive methods and associated factors

Good morning/afternoon. My name is_____

I am working with Abebaw Addis, a master's student in public health in University of Gondar. You are invited to participate in a research to be conducted by MPH student at the University of Gondar, College of Medicine and Health science, Institute of Public Health. Based on the information that you provide us the result of this study will help develop a better family planning services in the country by working with Ministry of health, Amhara regional bureau, Health institutions and other concerned bodies.

Your truthful answers for all of our questions will be very important to identify the demand of long acting contraceptive methods and associated factors in Bahir Dar city. Your answers will be kept confidential. You have a right to participate or not to participate in the study. You may also stop the interview at any time. If you decide that you do not want to participate in the study it will not affect the services you are receiving now or in the future.

We appreciate if you try to answer all the questions. If you agree to participate, the interview may take 20 minutes. If you have any question about the study you can ask.

So, do you agree to participate?

Yes_____ No_____

Thank you!

III) Questionnaire

Part I: Demographic and socioeconomic characteristics

Code	Questions	Possible answer	Remark
101	Respondent age	_____year	
102	Current place of residence	1. Urban 2. Rural	
103	What is your religion?	1. Muslim 2. Orthodox Christian 3. Protestant 4. Catholic 5. Others (specify)-----	
104	What is your occupation?	1. House wife 2. Daily laborer 3. Government employee 4. Merchant 5. Others (specify)_____	
105	How is your educational status?	1. Unable to read and write 2. Able to write and/or read 3. Elementary school (1-8) 4. Secondary school (9-10) 5. Preparatory, college and above	
106	How is the educational status of your husband?	1. Unable to read and write 2. Able to write and/or read 3. Elementary school (1-8) 4. Secondary school (9-10) 5. Preparatory, college and above	
107	How much your monthly family income?	_____ Birr	
108	Do you have Television or radio	1. Yes 2. No	
109	If yes, Have you ever heard an advertisement about Family planning	1. Yes 2. No	

Part II: Health service and reproductive health issues

Code	Questions	Possible answer	Remark
201	Did you start the anti retroviral drugs?	1. Yes 2. No	
202	Have you undergone discussion with your husband on family planning?	1. No 2. sometimes 3. Frequently	
203	Who is the main decider on using contraceptive method?	1. Woman/wife 2. Husband 3. Both	
204	Have you ever heard about long acting contraceptive methods (LACMs)?	1. Yes 2. No	If you say no, skip to 211
205	If yes, which LACM do you know?	1. Sub dermal implants 2. Intra uterine contraceptive device (IUCD) 3. Female sterilization 4. Male sterilization	Multiple response is possible
206	What was your source of information?	1. Mass media 2. Health professionals 3. Husband 4. Neighbors 5. Friends 6. Others (specify) _____	Multiple response is possible
207	Where could you get these LACMs?	1. Public Hospital 2. Health centers 3. Family guidance 4. Marriestopes international 5. Other (specify) _____	Multiple response is possible
208	Did you have past experience on any LACM?	1. Yes 2. No	not include currently using one
209	Have you heard Myths about LACMs?	1. yes 2. No	If no, skip to 211
210	If yes, what myth/s do you heard?	1. Sterility 2. Pain during insertion/surgical procedure	Multiple response is possible

		3. Increase weight 4. Cause Hypertension 5. IUCD interfere sexual act 6. IUCD causes foul smelling vaginal discharge 7. Implants cause arthritis 8. Other (specify)_____ _____ _____ _____ _____	
211	Are you pregnant?	1. Yes 2. No	If no, skip to code 214
212	If yes, Is it intended?	1. Yes 2. No	If yes, skip to code 221
213	If No, what type of unintended is it?	1. Un wanted 2. Mistimed	
214	If you are not pregnant, do you use modern contraceptive method/s now?	1. Yes 2. No	If no, skip to code 220
215	If yes, which contraceptive/s do you use?	1. Short acting contraceptive method (Less than one year duration of action) 2. Long acting contraceptive method (LACM) Specify_____	If it is LACM, skip to code 218
216	If it is SACM, is it your preference?	1. Yes 2. No	If yes, skip to code 220
217	If this SACM is not your preference, for what purpose do you use?	1. for limiting 2. for spacing	
218	If you are using LACMs, for what purpose do you use?	1. for limiting 2. for spacing	
219	What type of LACMs you are using?	1. Implants 2. IUCD 3. Tuba-ligation 4. Vasectomy	
220	What is your birth intension?	1. Want birth within two year 2. Want to wait for more than two year	

		3. No more children wanted 4. Difficult to decide	
221	Do you think that HIV is transmitted from mother- to - child during pregnancy, labour and delivery and through breast feeding	1. Yes 2. No	
222	Is it possible to reduce rate of HIV transmission from HIV positive mother to their child	1. Yes 2. No	
223	If yes, What can reduce?	1. By initiating ART 2. Through safe or institutional delivery 3. Through appropriate breast feeding option 4. ART prophylaxis for the child 5. Others _____ _____ _____	Multiple response is possible
224	How many live birth have you ever had?	_____	
225	How many alive children do you have currently?	_____	

Annex II: Questionnaire (Amharic version)

በጎንደር ዩኒቨርሲቲ የህክምናና የጤና ሳይንስ ኮሌጅ የህብረተሰብ ጤና አጠባብቅ አኒስቲቲዩት

የጥናት መረጃ መስጫ ሰነድ

እርስዎም በጎንደር ዩኒቨርሲቲ የህክምናና የጤና ሳይንስ ኮሌጅ የህብረተሰብ ጤና አጠባብቅ አኒስቲቲዩት በተጠቀሰው ተማሪ የማስትሬት ሳይንስ ጥናታዊ ምርምር ተሳታፊ እንዲሆኑ ተጋብዘዋል። በጥናቱ ለመሳተፍ ከመወሰኑ በፊት ከዚህ በታች የተዘረዘሩትን ጠቃሚ ነጥቦች አንብበው ግልፅ ያልሆነልዎትን ነገር ይጠይቁ።

1. የጥናቱ ርዕስ

በባህርዳር ከተማ በመንግስት ጤና ድርጅቶች የቅድመ-የፀረ ኤች አይቪ መዳሀኒት እና የፀረ ኤች አይቪ መዳሀኒት አገልግሎት ተጠቃሚ በሆኑ እድሜያቸው ከ15-49 አመት የሆኑና በጋብቻ ላይ ያሉ እናቶች ለረጅም ጊዜ የሚያገለግል የእርግዝና መከላከያ ያላቸው ፍላጎትና ላለመጠቀም ተያያዝ ምክንያቶችን ለማወቅ።

2. የጥናቱ ዓላማ

በባህርዳር ከተማ በመንግስት ጤና ድርጅቶች የቅድመ-የፀረ ኤች አይቪ መዳሀኒት እና የፀረ ኤች አይቪ መዳሀኒት አገልግሎት ተጠቃሚ በሆኑ እድሜያቸው ከ15-49 አመት የሆኑ በጋብቻ ላይ ያሉ እናቶች ለረጅም ጊዜ የሚያገለግል የእርግዝና መከላከያ ያላቸው ፍላጎትና ላለመጠቀም ተያያዝ ምክንያቶችን ለማወቅና በመረጃውም መሰረት የተገኙ ውጤቶች ለሚመለከታቸው አካላት ለምሳሌ ለአማራ ጤና ጥበቃ ቢሮ ለአስተዳደር አካላትና መንግስታዊ ያልሆኑ ድርጅቶች ያልተማላ የረጅም ጊዜ የሚያገለግል የእርግዝና መከላከያ ችግርን ለመቅረፍና ያልታቀደ እርግዝናንና ተያያዝ ችግሮችን ለመከላከል የሚያስችል ስልቶችን ለመንደፍ ይረዳል።

3. በጥናቱ ለመሳተፍ ጠቃሚ ነጥቦች

በዚህ መጠይቅ ውስጥ ስምዎትንና እርስዎን ለመለየት የሚያገለግል ነገር አይፃፍም። መመለስ ያልፈለጉትን ጥያቄ እንዲመልሱ አይገደዱም። በሂደት ውስጥ በጥናቱ ላለመካፈል በማንኛውም ወቅት ለመወሰን ይችላሉ። አስገዳጅ ሁኔታ ውስጥ አይገቡም። በጥናቱ ውስጥ ላለመካፈል በሚወስኑት ውሳኔ የተነሳ የሚደርስብዎት አንዳችም ሁኔታ የለም። የሚገኙትን የጤና አገልግሎትም አያስተዳጉልም። ነገር ግን ሁሉንም ጥያቄዎች እንዲመልሱልን እናበረታታለን። ጥያቄዎቹ ከ20 ደቂቃ በላይ አይወስድም።

4. በጥናቱ መሳተፍ የሚያስገኝ ጥቅምና ሊያደርስ የሚችል ጉዳት

- በጥናቱ መሳተፍ የሚያስገኝ ጥቅም፡- ለሚሰጡን መረጃ ከፍተኛ የለዉም ነገር ግን በሚሰጡን መረጃ መሰረት በማድረግ የምንሰጣቸው አስተያየቶች ለረጅም ጊዜ የሚያገለግል የቤተሰብ ቅድ ለአገልግሎትን ጥራት ለማስጠበቅ ከፍተኛ እገዛ ያደርጋል። እርስዎም የአገልግሎቱ ተመቃሚ ሊሆኑ ይችላሉ። በተጨማሪም መረጃውን በምንሰበስብበት ወቅት ከምንሰጠው የማስተማር አገልግሎት ተጠቃሚ መሆን ይሆናሉ።

- ጥናቱ ሊያደርስ የሚችል ጉዳት፡- መረጃውን ለመስጠት ተጨማሪ 20 ደቂቃ ሊወስድብዎት ይችላል።

5. የጥናቱ ተሳታፊዎች መብት፡- ስለጥናቱ የሚፈልጉትን ጥያቄ የመጠየቅ መብት አለዎት። ጥያቄዎትንም

1ኛ. ለጎንደር ዩኒቨርሲቲ ኢንስቲትዩት ሪሰርች ቦርድ (IRB)

2ኛ. ለድግሱ ነገሰ በጎንደር ዩኒቨርሲቲ የህክምናና የጤና ሳይንስ ኮሌጅ የህብረተሰብ ጤና አጠባብቅ እንስቲትዩት መምህር

ኢሜል: digsuneg@gmail.com

3ኛ. ለኸድጃ የኑስ በጎንደር ዩኒቨርሲቲ የህክምናና የጤና ሳይንስ ኮሌጅ የህብረተሰብ ጤና አጠባብቅ እንስቲትዩት መምህር

ኢሜል: kedijayenus@gmail.com

4ኛ. ለአበባው አዲስ በጎንደር ዩኒቨርሲቲ የህክምናና የጤና ሳይንስ ኮሌጅ የህብረተሰብ ጤና አጠባብቅ እንስቲትዩት ተማሪ

ኢሜል: abebaw.addis@gmail.com Tel: 0910905798

ስለትብብርዎ በጣም አመሰግናለሁ!!

የስምምነት ቅጽ

ጤና ይስጥልኝ! ስሜ _____ ይባላል:: እኔ የምሰራው በጎንደር ዩኒቨርሲቲ የማስተርስ ተማሪ ከሆነው ከአበባው አዲስ ጋር ነው:: በአማራ ክልል በባህር ዳር ከተማ ለረጅም ጊዜ ስለሚያገለግሉ የወሊድ መቆጣጠሪያ ዘዴዎች ለማጥናት በተዋቀረው ቡድን አባል ነኝ:: እርስዎም በጥናቱ ተሳታፊ እዲሆኑ ተጋብዘዋል:: እርስዎ የሚሰጡን መረጃ ከሌሎች የመረጃ ምንጮች ጋር ተደምሮ በሚሰጠን ውጤት መሰረት ከጤና ጥበቃ ሚኒስትር ፣ ከአማራ ጤና ጥበቃ ቢሮ ፣ ከጤና ተቋማት እና ሌሎች የሚመለከታቸው አካላት ጋር ለረጅም ጊዜ ሚያገለግሉ የቤተሰብ እቅድ መቆጣጠሪያ አገልግሎት ላማሸሻል ይረዳል::

የቤተሰብ ምጣኔ አገልግሎቱን በተመለከተ ለምንጠይቀዎት ጥያቄዎች የሚሰጡን ትክክለኛና ቀና መልስ በባህር ዳር ከተማ ለረጅም ጊዜ ስለሚያገለግሉ የወሊድ መቆጣጠሪያ ዘዴዎች በሚገባ ለመረዳት ወሳኝ ሚና አለው:: በዚህ መጠይቅ ውስጥ ስምዎት እና እርስዎን ለመለየት የሚያገለግል ነገር አይጻፍም:: በጥናቱ የመሳተፍም ሆነ ያለመሳተፍ መብት አለዎት፤ መመለስ ያልፈለጉትን ጥያቄ እዲመልሱ አይገደዱም:: በሂደቱ ውስጥ በጥናቱ ላለመሳተፍ በማንኛውም ወቅት መወሰን ይችላሉ:: በጥናቱ ውስጥ ላለመካፈል በሚወስኑት ውሳኔ የተነሳ የሚደርስብዎት አነዳችም ነገር የለም:: ነገር ግን ሁሉንም ጥያቄዎች እዲመልሱልን እናበረታታለን:: ለመሳተፍ ከወሰኑ ቃለ መጠይቁ 20 ደቂቃ ያህል ሊወስድ ይችላል:: ግልጽ ያልሆነ ነገር ካለ ጥያቄ መጠየቅ ይችላሉ::

በዚህም መሠረት በጥናቱ ለመሳተፍ ሙሉ ፈቃደኛ ነዎት?

አዎ ☐

አይደለሁም ☐

የጠያቂው ስም /ቁጥር/ _____

የጤና ድርጅቱ ስም _____

ቃለመጠየቅ የተደረገበት ጊዜ / / (ቀን /ወር /ዓ.ም)

ክፍል አንድ: የዲሞክራሲያዊ ፣ ማህበራዊ እና ኢኮኖሚያዊ ሁኔታዎች

መለያ ቁጥር	ጥያቄዎች	ለተጠየቀው ጥያቄ መልስ ሊሆን የሚችል	ምርመራ
101	እድሜሽ ስንት ነው?	_____ ዓመት	
102	አሁን የምትኖሪበት ቦታ	1. ከተማ 2. ገጠር	
103	ሃይማኖትሽ ምንድነው?	1. እስላም 2. ኦርቶዶክስ ክርስቲያን 3. ፕሮቴስታንት 4. ካቶሊክ 5. ሌላ (ይገለፅ)-----	
104	ስራሽ ምንድን ነው?	1. የቤት እመቤት 2. የቀን ሰራተኛ 3. የመንግስት ሰራተኛ 4. ነጋዴ 5. ሌላ (ይገለፅ)-----	
105	የትምህርት ደረጃሽ እንዴት ነው?	1. ማንበብና መጻፍ አልችልም 2. ማንበብና መጻፍ እችላለሁ 3. አንደኛ ደረጃ (1-8) 4. ሁለተኛ ደረጃ (9-10) 5. የከፍተኛ ትምህርት መሰናዶ, ኮሌጅ እና ከዚያ በላይ	
106	የባለቤትሽ የትምህርት ደረጃ እንዴት ነው?	1. ማንበብና መጻፍ አይችልም 2. ማንበብና መጻፍ ይችላል 3. አንደኛ ደረጃ (1-8)	

		4. ሁለተኛ ደረጃ (9-10) 5. የከፍተኛ ትምህርት መሰናጸፊያ, ኮሌጅ እና ከዚያ በላይ	
107	የቤተሰብ ሙሉ የወር ገቢ ምን ያህል ነው?	_____ ብር	
108	ሬዲዮ ወይም ቴቪዝን ቤታችሁ አለ?	1. አዎ 2. የለም	
109	መልስሽ አዎ ከሆነ ስለ ቤተሰብ ምጣኔ ሲተዋወቅ ሰምተሽ ታወቁያለሽ?	1. አዎ 2. የለም	

ክፍል ሁለት: የጤና አገልግሎት እና የስነ-ተዋልዶ ጤናን በተመለከተ

መለያ ቁጥር	ጥያቄዎች	ለተጠየቀው ጥያቄ መልስ ሊሆን የሚችል	ምርመራ
201	የፀረ ኤች. አይ. ቪ. መዳህኒት መውሰድ ጀምረሻል?	1. አዎ 2. አልጀመርሁም	
202	ከባለቤትሽ ጋር ስለ ቤተሰብ ምጣኔ ትወያያላችሁ?	1. ተወያይተን አናውቅም 2. አልፎ አልፎ 3. በተደጋጋሚ	
203	የወሊድ መቆጣጠሪያ ለመውሰድ ስትፈልጉ ዋና ወሳኔ ሰጭ ማን ነው?	1. አንች 2. ባለቤትሽ 3. አንችና ባለቤትሽ በጋራ	
204	ለረጅም ጊዜ የሚያገለግል የወሊድ መቆጣጠሪያ ሲባል ሰምተሽ ታውቃያለሽ?	1. አዎ 2. አላውቅም	አላውቅም ካላች ወደ ጥያቄ ቁጥር 207 ይለፉ
205	መልስሽ አዎ ከሆነ የትኛውን ታውቁያለሽ?	1. በክንድሩ ላይ ሚቀመጥ /የሚቀበር/ 2. ማህጸን ውስጥ ሚቀመጥ 3. በቀዶ ጥገና የሚሰራ ዘላቂ (የሴት) 4. በቀዶ ጥገና የሚሰራ ዘላቂ (የወንድ)	ከአንድ በላይ መልስ መመለስ ይቻላል
206	ስለ ለረጅም ጊዜ የሚያገለግል የወሊድ	1. ከብዙኃን መገናኛ (ራዲዮ/ቴሌቪዥን)	ከአንድ በላይ

	መቆጣጠሪያ እውቀት/ግንዛቤ ያገኘሽው ከየት ነው?	2. ከጤና ባለሙያ/ሙያተኛ 3. ከባለቤትሽ 4. ከጎረቤት 5. ከጃደኛ 6. ሌላ (ይገለፅ) _____	መልስ መመለስ ይቻላል
207	ለረጅም ጊዜ የሚያገለግል የወሊድ መቆጣጠሪያ አገልግሎት ከየት ማግኘት ትችላለሽ?	1. ከመንግስት ሆስፒታል 2. ከጤና ጣቢያ 3. ከቤተሰብ መምሪያ 4. ሌላ (ይገለፅ) _____	ከአንድ በላይ መልስ መመለስ ይቻላል
208	ካሁን በፊት ለረጅም ጊዜ የሚያገለግል የወሊድ መቆጣጠሪያ ወስደሽ ታውቂያለሽ?	1. አዎ 2. ወስጄ አላውቅም	አሁን እየወሰደች ያለውን አያጠቃልልም
209	ስለ ለረጅም ጊዜ የሚያገለግል የወሊድ መቆጣጠሪያ አገልግሎት እምነቶች/አባባሎች ሰምተሽ ታውቂያለሽ?	1. አዎ 2. ሰምቶ አላውቅም	ሰምታ ካላወቀች ወደ ጥያቄ ቁጥር 211 ይለፉ
210	መልስሽ አዎ ከሆነ የሰማሽው ምንድን ነው?	1. መሀንነት ያመጣል 2. መቆጣጠሪያው በሚሰጥበት ወይም በሚሰራበት ጊዜ የሚሰማ ህመም 3. የሰውነት ክብደት ይጨምራል 4. የደም ግፊት ይጨምራል 5. ማህፀን ውስጥ የሚቀመጠው ለፆታዊ ግንኙነት አይመችም 6. ማህፀን ውስጥ ሚቀመጠው የማህፀን ፈሳሽ ወይም ሽታ ያመጣል 7. ከንድ ላይ ሚቀበረው የቁርጥማት ህመም ወይም የከንድ መዛል ያመጣል 8. ሌላ (ይገለፅ) _____ _____ _____	ከአንድ በላይ መልስ መመለስ ይቻላል
211	አሁን ነፍሰጡር/እርጉዝ ነሽ?	1. አዎ 2. አይደለሁም	አይደለሁም ካለች ወደ ጥያቄ ቁጥር 214 ይለፉ
212	መልስሽ አዎ ከሆነ በእቅድ ነው የፀነሽው?	1. አዎ 2. በእቅድ አይደለም	አዎ ካለች ወደ ጥያቄ ቁጥር 221 ይለፉ
213	ያለ እቅድ ነው ስትይ ምን ማለት ነው?	1. ያለወቅቱ ወይም ያለጊዜው የተረገዘ ነው 2. ከናንድያው ያልተፈለገ እርግዝና ነው	

214	ነፍሰጡር ካልሆነሽ ዘመናዊ የወሊድ መቆጣጠሪያ አሁን እየወሰድሽ/እየተጠቀምሽ ነው?	1. አዎ 2. አልጠቀምም	አልጠቀምም ካለች ወደ ጥያቄ ቁጥር 220 ይለፉ
215	እየተጠቀምኩ ነው ካልሽ የትኛውን አይነት ነው የምትጠቀሟው?	1. ለአጭር ጊዜ የሚያገለግለውን (ከአንድ አመት በታች የሚያገለግል) 2. ለረጅም ጊዜ የሚያገለግለውን አይነቱ ይገለፅ_____	ለረጅም ጊዜ የሚያገለግለውን ከሆነ ወደ ጥያቄ ቁጥር 218 ይለፉ
216	ለአጭር ጊዜ የሚያገለግለውን ከሆነ የምትጠቀሟው ይህ ያንች ምርጫ/ፍላጎት ነው?	1. አዎ 2. አይደለም	መልሷ አዎ ከሆነ ወደ ቁጥር 220 ከሆነ
217	ይህ ያንች ምርጫ/ፍላጎት ካልሆነ ዘዴውን የምትጠቀሟው ለምን አላማ ነው?	1. አረርቆ/ዘግይቶ ለመውለድ 2. እስከ መጨረሻው ልጅ ላለመውለድ	
218	ለረጅም ጊዜ የሚያገለግለውን የወሊድ መቆጣጠሪያ አሁን እየተጠቀምሽ ከሆነ ዘዴውን የምትጠቀሟው ለምን አላማ ነው?	1. አረርቆ/ዘግይቶ ለመውለድ 2. እስከ መጨረሻው ልጅ ላለመውለድ	
219	የትኛውን አይነት ለረጅም ጊዜ የሚያገለግለውን የወሊድ መቆጣጠሪያ ነው እየተጠቀምሽ ያለሽው?	1. ከንድ ላይ ሚቀበረውን 2. ማህጸን ውስጥ ሚቀመጠውን 3. በቀዶ ጥገና የሚሰራ ዘላቂ (የሴት) 4. በቀዶ ጥገና የሚሰራ ዘላቂ (የወንድ)	
220	ለወደፊት ልጅ የመውለድ ሀሳብሽ/ፍላጎትሽ እንዴት ነው?	1. በዚህ ሁለት አመት ውስጥ መውለድ እፈልጋለሁ 2. ከሁለት አመት በኋላ መውለድ እፈልጋለሁ 3. ከናንድያው ልጅ መውለድ አልፈልግም	
221	ኤች. አይ. ቪ. ቫይረስ ቫይረሱ ካለባት እናት ወደ ልጅ በእርግዝና፤ በወሊድ ጊዜ እና በጡት ወተት ይተላለፋል ብለሽ ታስቢያለሽ?	1. አዎ 2. አይተላለፍም	
222	ኤች. አይ. ቪ. ቫይረሱ ካለባት እናት ወደ ልጅ የመተላለፍ እድል የሚቀንስ ነገር አለ ብለው ያስባሉ?	1. አዎ 2. አለ ብዬ አላስብም	
223	አዎ ካሉ በምን መንግድ መቀነስ ይቻላል?	1. የፀረ-ኤች አይ ቪ መዳህኒት በመውሰድ 2. በጤና ተቋማት (በጤና ሙያተኛ) መውለድ 3. ትክክለኛ የጡት አጠባብ ዘዴን በመምረጥ (በመከተል) 4. ለህጻኑ የፀረ-ኤች አይ ቪ መከላከያ መዳህኒት በመስጠት 5. ሌላ (ይገለፅ)_____	ከአንድ በላይ መልስ መመለስ ይቻላል
224	ስንት ልጆች ወልደሻል?	_____	
225	አሁን ስንት ልጆች አሉሽ?	_____	

Annex III: Declaration

I, under signed sinner MPH student declare that this thesis is my original work impartial fulfillment of the requirement of the degree of masters of public health in reproductive health.

Name of student _____ signature _____

Place of submission: University of Gondar, College of medicine and health science,
Institute of public health.

Date of submission _____

This Thesis work is submitted for examination with the approval of my advisors.

Advisors:

1. _____ Signature _____

2. _____ Signature _____